



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,969	12/08/2000	Genevieve Loussouam	2365-25	1751

7590 12/18/2003

NIXON & VANDERHYE P.C.
8th Floor
1100 North Glebe Road
Arlington, VA 22201

EXAMINER

BHATNAGAR, ANAND P

ART UNIT	PAPER NUMBER
----------	--------------

2623

DATE MAILED: 12/18/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,969

Applicant(s)

LOUSSOUARN ET AL.

Examiner

Anand Bhatnagar

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-17 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A.) Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreindel et al. (U.S. patent 6,162,212).

Regarding claims 1 and 12: Kreindel et al. discloses a system for the simulation and predictive analysis of the evolution of a region of the scalp of a subject over time (Kreindel et al.; col. 2 lines 35-45 and col. 6 lines 46-50, where the growth of the hair is predicted and simulated over time in an area of a person's skin. The skin is read as the "scalp" since the scalp is the skin is the outerlayer on the head), characterized in that it comprises a means of observation of the said hair region able to output digital observation data (Kreindel et al.; col. 2 lines 35-40, the hair region of an area of the skin is observed), a first digital data processing means capable of classifying elementary parts of the said region on the basis of the observation data (Kreindel et al.; col. 2 lines 35-40 and col. 3 lines 11-18 and 38-41, where the hair is observed and analyzed for the growth stages present in the hairs), a second digital data processing means capable of simulating the evolution of the said hair region as a

function of the data emanating from the first digital data processing means (Kreindel et al.; col. 2 lines 40-45 and col. 6 lines 45-49, where the simulation of hair growth takes place) , and a means of displaying the data emanating from the second digital data processing means (Kreindel et al.; col. 6 lines 45-49, where the simulation is presented by graphic illustration, read as displayed), the data output by the first processing means comprising at least one classification according to the duration of the phases of the hair cycle (Kreindel et al. col. 3 lines 53-67, where the classification is performed of the duration of the phases of the hair cycle).

Kreindel et al. discloses to observe the hair growth cycles on a patient and to simulate the growth of hair over time (Kreindel et al.; col. 3 lines 37-41 and 53-67 and col. 6 lines 36-49). Kreindel does not teach a first processing nor a second processing. It is a matter of configuration of obtaining a final product. One skilled in the art may make one processor which may obtain the final product or design the system where 2 or more processors may perform specific tasks to obtain the same final product.

B.) Claims 2-6, 8-11, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreindel et al. (U.S. patent 6,162,212) in view of Amornsiripanitch (U.S. patent 6,389,150, will be further referred to as Amor.).

Regarding claim 2: Kreindel et al. discloses to obtain parameters pertaining to the growth cycles of the hairs, such as duration of the cycles

Art Unit: 2623

number of follicles during each cycle, individual rate of growth of hairs, percentage of disappeared hairs, etc. (Kreindel et al.; col. 3 lines 53-67, where the percentage of clearance is read as the proportion of disappeared hairs and the classification of the numbers of hairs in each specific growth cycles is read as the individual rate of growth of hairs). Kreindel et al. does not teach to obtain certain hair parameters such as density of hairs, proportion of hairs in the dead phase, etc. Amornsiripanitch teaches to obtain certain parameters relating to the growth of the hairs such as percentage of growing hairs versus non-growing hairs, diameter size of the hair, density of the hair, budding activities, etc (Amor.; col. 2 lines 38-57 and col. 3 lines 8-11). It would have been obvious to one skilled in the art to combine the teaching of Amor. To that of Kreindel et al. because they are analogous in analyzing the growth of hairs and obtaining certain parameters pertaining to the growth cycles of the hairs. One skilled in the art would have been motivated to incorporate the teaching of hair reproduction parameters, modified for other parameters (such as proportion of dead hairs, proportion of disappeared hairs, etc.), of Amor. to the system of Kreindel et al. in order to observe and record the dynamic changes of all the parameters through out the hair's life cycle (Amor.; col. 2 lines 24-26).

Regarding claim 3: System characterized in that the second processing means comprises a means for applying to each observed hair a duration of continuation in its prevailing phase (Kreindel et al. col. 3 lines 53-67, where the relative number of hair in the Anagen stage is read as a duration of continuation

in its prevailing phase and the Anagen stage is seen as the prevailing stage), on the basis of a distribution of the phase durations (Kreindel et al.; col. 3 lines 53-67, where the numbers of the hairs in each stage of growth is seen as the distribution) and of a random number.

Regarding claim 4: System characterized in that the second processing means comprises a means for estimating the number of cycles $n_{sub.c}$, performed by an observed hair, and for comparing it with a predetermined maximum number of cycles $N_{sub.k}$, a cycle being defined by the successive passage through the three states, anagen, telogen and disappeared (Kreindel et al.; col. 6 lines 36-49, where the simulation of hair regrowth is performed for a time period of one week. In order to perform the task of simulating the life cycle of the hair for the week the whole life cycle must be known of how long the growth cycle takes for the hairs and use this value to calculate the growth for the week. This is obviously the same process used to calculate when a hair will be lost by knowing the time of a full hair life and the length of one complete growth cycle).

Regarding claim 5: System characterized in that the second processing means comprises a matrix of probabilities of transition from one phase to another phase (Kreindel et al.; Table 1 where the percentage of time a hair spends in the anagen phase is given depending on the location of the hair on the body. By the percentage we know that the rest of the time, in percent, is spent on the rest of

Art Unit: 2623

the growth cycle combined and how long it would it to go through the different phases.).

Regarding claim 6: System characterized in that the second processing means comprises a means for allocating a given duration of phase to a hair (Kreindel et al.; col. 3 lines 53-67 and table 1).

Regarding claim 8: System characterized in that the second processing means comprises a matrix representative of the influence of data relating to neighbouring hairs on the transition from one phase to another phase (Kreindel et al.; Table 1, where different regions on the body are studied for their respective hair growth cycles. In order to observe how many hairs are in the anagen phase in their respective locations all the neighboring regions must be observed to see what phases or transition phases that they are currently in).

Regarding claim 9: System characterized in that the second processing means comprises a table representative of the evolution of the mean values of duration of the anagen, telogen and disappearance phases (Amor.; col. 4 lines 1-3, where the median, mode, etc. are determined of the growth cycles).

Regarding claim 10: System characterized in that it comprises a means for performing a third processing for simulating the evolution of the entire head of hair of the subject on the basis of the data emanating from the second processing means (Kreindel et al.; col. 6 lines 45-50, where the simulation is performed).

Regarding claim 11: System according to Claim 10, characterized in that it comprises a means for associating data relating to the evolution of other sites with the data emanating from the third processing means (Kreindel et al.; Table 1 and col. 6 lines 45-50, where different areas of the body are observed for their specific hair growth patterns).

Regarding claim 13: It is rejected for the same reason as claim 2 above and for the following limitation of shaving the hair region (Amor.; col. 5 lines 34-36, where the hairs are cut to observe the hair growth stage). The obvious and motivation are the same as claim 2.

Regarding claim 14: Process according to Claim 13, in which, on the basis of the observation data, the hair coverage produced per unit time and area is calculated (Amor.; col. 2 lines 38-57 and col. 3 lines 9-11, where the percentages duration of the hair cycles are determined and the density of the hair region at a specific period of time). The obvious and motivation are the same as claim 2.

Regarding claim 15: Process according to 12 in which the second digital processing takes into account the ratios of the durations of the anagen and telogen phases (Amor.; col. 2 lines 38-57 and col. 3 lines 9-11, where the percentages duration of the hair cycles are determined and the density of the hair region at a specific period of time). The obvious and motivation are the same as claim 2.

Regarding claim 16: It is rejected for the same reason as claims 1 and 12 above as for the following limitation of a third digital processing and a flat

Art Unit: 2623

projection. (Kreindel et al.; col. 6 lines 35-50 where the data is simulated and displayed. It is a matter of configuration as to what type or shape of display is configured to the system).

Regarding claim 17: It is rejected for the same reason as claims 1 and 12 above and for the third processing displaying the data (Kreindel et al.; col. 6 lines 35-50).

Allowable Subject Matter

2. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vaisberg et al. (U.S. patent 6,651,008 B1) for a system for predictive cellular bioinformatics.

Johnson et al. (U.S. patent 6,581,011 B1) for a database of a tissue population.

Art Unit: 2623

Contact Information


4. Any inquiry into this communication should be directed to Anand Bhatnagar whose telephone number is 703-306-5914, whose supervisor is Amelia Au whose number is 703-308-6604, group receptionist is 703-305-4700, and group fax is 703-872-9306.

AB

Anand Bhatnagar

Art Unit 2623

December 12, 2003


AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600